

IN THE CLAIMS:

Please cancel claims 1-20 and add new claims 21-27.

21. In a hermetically sealed non-aqueous electrochemical cell including an active metal anode, a porous solid cathode having a cathode material selected from the group consisting of MnO_2 , silver vanadium oxide, and V_6O_{13} , a separator between the anode and cathode and a liquid electrolyte wetting the separator and in contact with the anode and cathode, wherein the electrolyte comprises a salt of the anode metal dissolved in an organic solvent, the improvement comprising the addition as a cosolvent with the solvent, of a quantity of diglyme.

22. The cell of claim 21 in which the anode comprises lithium.

23. The cell of claim 21 in which the solvent is propylene carbonate.

24. The cell of claim 21 in which the relative amounts of cosolvent and solvent by weight percentage range from about 10% cosolvent, balance solvent, to about 75% cosolvent, balance solvent.

25. In a hermetically sealed non-aqueous electrochemical cell including a lithium metal anode, a solid cathode having a cathode material selected from the group consisting of vanadium oxide, MnO_2 and silver vanadium oxide, a separator between the anode and cathode and a liquid electrolyte wetting the separator and in contact with the anode and cathode, wherein the electrolyte comprises a salt of the anode metal dissolved in an organic solvent, the improvement comprising the addition of a mixture of solvents as the organic solvent selected from organic solvents having a boiling point greater than about 100°C and a dielectric constant greater than about 5.

A2
Cont.

26. In a hermetically sealed non-aqueous electrochemical cell including a lithium metal anode, a solid cathode having a cathode material selected from the group consisting of vanadium oxide, MnO_2 and silver vanadium oxide, a separator between the anode and cathode and a liquid electrolyte wetting the separator and in contact with the anode and cathode, wherein the electrolyte comprises a salt of the anode metal dissolved in an organic solvent, the improvement comprising the addition of a mixture of organic solvents as the organic solvent, the solvents selected from the group consisting of diglyme, sulfolane, ethylene carbonate, propylene carbonate, and gammabutyrolactone.

27. In an electrochemical cell comprising a casing; an anode; a solid cathode having as active material a material selected from the group of materials consisting of metal oxide bronzes and carbon monofluoride; and an ionically conductive electrolyte solution, which is operatively associated with said anode and cathode, comprising a lithium salt and an organic solvent, wherein the improvement comprises a combination of components rendering the electrochemical cell autoclavable and dimensionally and chemically stable during repeated prolonged exposures to heat of from about 130°C , said combination comprising:

an anode having as active material a material which has a melting point greater than 150°C and which is selected from groups IA and IIA of the Periodic Table; and

a mixed electrolytic organic solvent having a boiling point greater than about 100°C and a dielectric constant greater than about 5 selected from the group consisting of sulfolane, ethylene carbonate, propylene carbonate and gammabutyrolactone.--
